

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Miao Zhu

Serial No.: N/A

Examiner: N/A

Filing Date: Herewith

Group Art Unit: N/A

Title: METHOD AND APPARATUS FOR SEQUENCING POLYMERS THROUGH TUNNELING CONDUCTANCE VARIATION DETECTION

COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

This Information Disclosure Statement is submitted:

- (a) ☒ Under 37 CFR 1.97(b).  
(Within three months of filing national application; or date of entry of national application; or before mailing date of first Office action on the merits; whichever occurs last).
- (b) ☐ Under 37 CFR 1.97(c) together with *either* a:  
☐ Statement under CFR 1.97(e), or  
☐ \$180.00 fee under 37 CFR 1.17(p).  
(After the CFR 1.97(b) time period, but before a final action or notice of allowance, whichever occurs first).
- (c) ☐ Under 37 CFR 1.97(d) together with: a  
Statement under 37 CFR 1.97(e), *and*  
\$180.00 fee as set forth in 37 CFR 1.17(p).  
(After a final action or notice of allowance, whichever occurs first, but before payment of the issue fee).

☐ STATEMENT UNDER 37 CFR 1.97(e)

The undersigned certifies that:

☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the statement, or

☐ No item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, was known to any individual designated in 37 CFR § 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

☐ PRIOR APPLICATIONS

References identified with an asterisk (\*) in the enclosed PTO Form 1449, were disclosed in prior Patent Application No. , filed , now U.S. Patent No. , and, as such, copies thereof are not included pursuant to the provisions of 37 CFR 1.98(d).

☐ FOREIGN LANGUAGE DOCUMENTS

A concise explanation of the relevance of foreign language patents, foreign language publications and other foreign language information listed on PTO form 1449, as presently understood by the individual(s) designated in 37 CFR 1.56(c) most knowledgeable about the content is given on the attached sheet, or where a foreign language patent is cited in a search report or other action by a foreign patent office in a counterpart foreign application, an English language version of the search report or action which indicates the degree of relevance found by the foreign office is listed on form PTO 1449 and is enclosed herewith.

☐ FEE AUTHORIZATION

Please charge to Deposit Account **50-1078** the sum of \_\_\_\_\_. At any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account **50-1078** pursuant to 37 CFR 1.25.

I hereby certify that this correspondence is being deposited with the United States Postal Service as:

☐ First Class Mail

☒ "Express Mail Post office to Addressee" service under 37 CFR 1.10.

Express Mail Label No. EL449701733US

In an envelope addressed to: Commissioner for Patents,  
P.O. Box 1450, Alexandria VA 22313-1450.

Date of Deposit: March 10, 2004 **OR**

☐ I hereby certify that this paper is being facsimile transmitted to the Patent and Trademark Office on the date shown below.

Date of Facsimile:

Typed Name: Jacob N. Erlich

Signature: \_\_\_\_\_

Respectfully submitted,  
Miao Zhu

By \_\_\_\_\_

Jacob N. Erlich  
Attorney/Agent for Applicant(s)

Reg. No. 24,338

Date: March 10, 2004

Telephone No. (617) 854-4000

<b>Form PTO-1449</b>  <b>LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT</b>  (Use several sheets if necessary)	<b>ATTORNEY DOCKET NO.</b> 10030988-1	<b>SERIAL NO.</b> N/A
	<b>APPLICANT</b> Miao Zhu	
	<b>FILING DATE</b> Herewith	<b>GROUP</b> N/A

REFERENCE DESIGNATION		U.S. PATENT DOCUMENTS		
EXAMINER INITIAL	*	DOCUMENT NUMBER	DATE	NAME
		5,795,782	08/18/98	Church et al.
		5,843,767	12/01/98	Beattie
		6,015,714	01/18/00	Baldarelli et al.
		6,267,872 B1	07/31/01	Akeson et al.
		6,355,420 B1	03/12/02	Chan
		6,362,002 B1	03/26/02	Denison et al.
		2002/0119455 A1	08/29/02	Chan
		2002/0197618 A1	12/26/02	Sampson
		2003/0044816 A1	03/06/03	Denison et al.

FOREIGN PATENT DOCUMENT						
		DOCUMENT NUMBER	DATE	NAME	TRANSLATION YES	NO
		WO 01/81896 A1	11/01/01	Eagle Research & Development LLC		X
		WO 02/42757 A1	05/30/02	Sahltech I Goteborg AB		X

OTHER REFERENCES (including Author, Title, Date, Pertinent Pages, etc.)	
	Kasianowicz, J.J. et al. (Nov. 1996) "Characterization of individual polynucleotide molecules using a membrane channel." PNAS 93, 13770-13773.
	Stipe, B.C. et al. (June 1998) "Single-Molecule Vibrational Spectroscopy and Microscopy." Science 280, 1732-1735.
	Meller, A. et al. (Feb. 2000). "Rapid nanopore discrimination between single polynucleotide molecules." PNAS 97(3), 1079-1084.
EXAMINER	DATE CONSIDERED

\* Copies of these references are not enclosed Pursuant to 37 CFR 1.98(d). (See accompanying IDS)